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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,032	11/30/2000	Jeffrey Kent Fredenburgh	03266.000100	9978
5514 7590 04/05/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER WARE, DEBORAH K	
			ART UNIT	PAPER NUMBER
			1651	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/05/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/726,032	FREDENBURGH	
	<b>Examiner</b>	<b>Art Unit</b>	
	Deborah K. Ware	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 46-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

Claims 46-69 are presented for examination on the merits.

### ***Response to Amendment***

The amendment response filed January 19, 2007, has been received and entered. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

Claims 46-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. in view of WO 97/43385 (Horner), Horney et al. , Blyth et al and Vinod, all cited of record on a PTO-892 and/or PTO-1449 Form

Claims are drawn to a composition for controlling odor associated with deposits of organic material which can cause odors, the composition comprising comprising dormant spore forming bacteria and adhering agentts). The adhering agent can be stain-blocking chemicals or fluorochemicals. Further, the composition optionally includes sodium bicarbonate or molecular sieves. Also the stain-blocking agents can be varied sulfonated polymers.

Lin et al teach protected spore formers as the desired bacteria of which are of the genus Bacillus (B.) and include species B. laevolacticus, B. pasteurii and B. amyloliquefaciens. Note col. 3, lines 19-21 and col. 4, lines 40-65. Further, the cell counts are within  $10^6$  to  $10^8$  range, note col.s 5-6, lines 35-40.

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WO Patent (Horner), cited above, teach a composition for controlling odor for soft surfaces and hard surfaces using microbial enzymes and sulfonated surfactants, anti-soil agents (pages 32-33, all lines), sodium carbonate (page 56, line 20), bicarbonates (page 30, line 33), condensation polymers (page 12, lines 20-35).

Horney et al teach method and composition for controlling odor for soft surfaces using Bacillus bacterial agent and other additives as necessary. Bacillus megaterium is specifically disclosed. Note col. 2, lines 30-50 and see the abstract. Also note col. 3-4, all lines.

Each of Blyth et al. and Vinod teach method and composition for controlling stains on soft surfaces comprising applying stain blockers and fluorochemicals. Specifically note Vinod, at col. 6, lines 45-65., and note abstracts of both references.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was filed to combine the disclosure of Lin, WO Patent, Horney, Blyth and Vinod in order to provide for a composition for controlling odor. Each of Lin, WO Patent (Horner) and Horney teach deodorizing using bacterial agents and their products (i.e. dormant spores, enzymes, etc.). To select for dormant bacteria to control and provide for a composition for odor control is clearly taught. To combine the dormant bacteria with adhering agents is also disclosed wherein surfactants will adhere organic deposits and thus, function as an adhering agent.

Other adhering agents and/or trapping agents or neutralizing agents such as bicarbonate (i.e. sodium bicarbonate is disclosed). Specifically stain-blockers and fluorochemicals are well known in the art to be useful for treating soft surfaces and to add

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them to dormant bacteria is clearly within the purview of an ordinary artisan. Horney clearly teaches additives to dormant bacteria is well known. The bacterial counts useful are disclosed. The specific adhering agents are disclosed. To combine the two is clearly an obvious modification of the cited prior art. Thus the claims are *prima facie* obvious over the cited prior art.

### ***Response to Arguments***

Applicant's arguments filed January 19, 2007, have been fully considered but they are not persuasive. While the language "consisting essentially of" excludes ingredients which would affect the basic and novel characteristics of the product defined in the claim is correct, the claim 46 is not so limited since composition (A) which reads on "includes" of which is akin to "comprising" the surfactant can be present. Hence, providing that the composition of claim 46 was limited only to composition (B) Applicants' arguments would have been more persuasive. Also in claim 48 which does require composition (B) but in accordance with a composition of claim 46, claim 48 also uses "comprising" language which means a surfactant can be present.

The argument that Lin does not teach any bacterial spores remain behind after cleaning is noted, however, the composition as claimed does not require the spores, per se, but only that the bacterial microorganism present in the claimed composition be *capable* of producing spores. Further, Lin is combined with other references which do teach adhering agents, notably WO Patent (or Horner), Vinod and Blyth. Further, Horney is cited for its teaching of bacterial products and additional ingredients as necessary, note above. Horney et al are not cited for a specific teaching of adhering

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agents, although they do teach a carrier including a perfumant is present. Horner et al clearly teach adhering agents since they disclose condensation products, page 12, lines 20-22.

Vinod and Blyth et al clearly teach fluorochemicals and stain blockers which are encompassed by the claimed adhering agents. One of skill in the art would have been motivated to combine these agents to control odor with an expectation of successful results because by adhering the composition they would desire to prolong the odor controlling effect for treating a surface. Also adhering agents would have been expected to be successful for applying any composition to a surface especially with a desire to control odor.

Therefore, once again in an overall response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The arguments that the disclosed compounds are different than those newly required by claim 46 are noted. However, the art teaches one or more of the identical compounds (i.e. fluorochemicals) claimed herein, and one of skill would have been motivated to select for these compounds. Also, with the combination of the cited prior art the composition of Lin would not be expected to be washed away as alleged by Applicants. Lin et al teach many surfaces and they teach that their composition provides long term effect of beneficial bacteria that control pathogens and degrade wastes on a surface, see the abstract.

Horner et al teach or suggest a composition of an adhering agent and the bacteria since at page 10, line 13, the composition is disclosed to be liquid and to include enzymes derived from the same bacterium as claimed, see page 7, lines 8-17. Further, stain blockers such as maleic anhydride polymers (i.e. hydrolyzed vinyl aromatic maleic anhydride polymer) are disclosed at page 32, lines 33-37 and also acrylic acid co-polymer at line 36. Thus, the argument that it would not have been obvious to include stain blockers and fluorochemicals in compositions containing bacteria is not deemed persuasive because the bacteria produce enzymes which can react with the compounds to provide for adherence to the surface. Note that any surfactant present can be in such low percentage amounts that one of skill would have been motivated to select for these agents and compounds for use together with the expectation of successful results. Also Horner et al disclose bicarbonates to be present at page 30, line 33:

Each of Lin et al, Horney et al and Horner et al disclose varied *Bacillus* spore formers as claimed herein, see discussion above. Lin et al clearly teach that the spore formers provide a long lasting effect, see the abstract. Thus, this at least suggests that their composition would have been expected to be stable, see the abstract of Lin et al. Further, to select for the whole microorganism of which contains the enzyme recognized by Horner et al to be effective for treating surfaces and malodiferous organic material is clearly an obvious modification of the cited prior art.

Also Horner et al and Lin et al both teach non-ionic surfactants to be useful with the spore formers and hence they would have been expected to provide successful

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results and Lin et al teach that they do not inhibit spore stability, note column 5, lines 54-55. Therefore, the argument that Lin et al teach away from the combination by suggesting that "usual" surfactants, which are used by Horner's laundry detergent, may adversely affect the activity of the dormant bacteria, is maintained to not be well-founded. Furthermore, Horner et al is not limited to simply a laundry detergent per se, as alleged by Applicants' response. Horner et al clearly teach hard surface cleaning, note page 1, line 15.

Therefore, the alleged connection by Applicants that the composition in Horner et al and Lin et al is intended to be washed away during use is not convincing or persuasive. The same chemical agents are disclosed as discussed above, and would intrinsically function as adhering agents because surfactants and increase surface tension and while there may be some "washing away" the amounts used can be controlled in order to obtain the desired result.

Again, the point by Applicant that Horney teaches away from replacing enzymes is not relevant to the combination of the cited references since Horney does teach positively that other ingredients are added as necessary. The motivation to combine bacterial products with other necessary ingredients for an intended purpose is clearly set forth in the combination of all of the cited references taken together and not just Horney and Lin, or vice versa.

Again, to select adhering agents as the necessary ingredient to combine with bacterial products for effecting odor control is clearly taught or suggested by the cited prior art combination and not just gleaned from one or two references taken together.



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Furthermore, Horner et al or WO teaches adhering agents as well for use in odor control and combining them with bacterial products. One of skill would have been motivated to adhere bacteria and other agents to a surface to effect continued odor control over a period of time and to add an adhering agent to the composition to effect this is clearly an obvious modification of the cited prior art.

Again, Vinod and Blyth et al teach that the stain blockers can serve as adhering agents because they coat the surface and hence adhere to it so they can adhere the bacteria as well. Vinod clearly teach or suggest at column 7, lines 25-50, that there is a desire to improve the overall distribution and contact between the surface and the composition and that this can be improved by applying the stain blocker together with a detergent (i.e. surfactant). Thus, adhesion is a desired expected successful result of the cited prior art combination and in the absence of evidence to the contrary the claim remains prima facie obvious.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


The prior art of record is cited and discussed above.


No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah K. Ware whose telephone number is 571-272-0924. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah K. Ware  
March 30, 2007

  
DAVID M. NAFF  
PRIMARY EXAMINER  
ART UNIT 1287657